



GOVERNMENT OF INDIA
TARIFF COMMISSION

REPORT ON
The Continuance of Protection
to the Ball Bearings Industry



BOMBAY, 1956

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GOVERNMENT OF INDIA
MINISTRY OF COMMERCE AND INDUSTRY
NOTIFICATION
TARIFFS

New Delhi, the 4th August, 1956.

No. 18(1)-T.B./56.—WHEREAS the Central Government is satisfied after due inquiry that the duty chargeable under the Indian Tariff Act, 1934 (32 of 1934) in respect of the articles specified in Item No. 72(37) of the First Schedule to the said Act, and characterised as protective in the third column thereof, has become ineffective for the purpose of securing the protection intended to be afforded by it to similar articles manufactured in India;

NOW, THEREFORE, in exercise of the powers conferred by sub-section (1) of section 4 of the said Act, as in force in India and as applied to the State of Pondicherry, the Central Government hereby increases, with effect from the 4th August, 1956, the duty of customs on the said article so that the duty chargeable shall from the said date be as specified in column (3) of the Table annexed hereto.

THE TABLE

Item No. of Tariff (1)	Name of article (2)	Rate of duty (3)
72 (37)	Adaptor bearings not exceeding 2" bore diameter which are specially designed for use exclusively with power driven machinery.	94½% <i>ad valorem</i>

N. SUBRAHMANYAM,
Joint Secretary to the Government of India.

PERSONNEL OF THE COMMISSION

SHRI K. R. DAMLE, I.C.S.Chairman

SHRI B. N. ADARKAR, M.A. (CANTAB)Member

SHRI C. RAMASUBBANMember

DR. S. K. MURANJAN, D.Sc. (LONDON)Member

PANEL FOR THE INQUIRY

SHRI K. R. DAMLE

SHRI B. N. ADARKAR

SHRI S. K. BOSE, M.A., I.A.S.—Secretary



GOVERNMENT OF INDIA

MINISTRY OF COMMERCE AND INDUSTRY

RESOLUTION

TARIFFS

New Delhi, the 4th August, 1956.

No. 18(1)-T.B./56.—The Tariff Commission has submitted its Report on the continuance of protection to the Ball Bearings Industry beyond the 31st December 1956, on the basis of an inquiry undertaken by it under Section 11(e) and 13 of the Tariff Commission Act, 1951. Its recommendations are summarised below :—

- (1) The protective duty on ball bearings up to 2" bore diameter (other than adapter bearings) assessable under I.C.T. items 72(35) and 72(36) should be maintained at the existing rates. The duty on adapter bearings assessable under item 72(37) should be raised to 94½% *ad valorem* so as to bring it on par with the other protected types of ball bearings. The duration of these protective duties should be extended to 31st December, 1960.
- (2) Imports of aircraft bearings covered by airworthiness affidavits or release notes should be exempted from the payment of so much of the duty leviable thereon as is in excess of the rate specified under I.C.T. item 76.
- (3) High Carbon chromium steel required for the manufacture of ball bearings should be assessed to duty at the concessional rate applicable to special steels imported for the manufacture of small tools.
- (4) The National Bearing Company has estimated its annual capacity at 480,000 bearings per shift. The Development Wing in the Ministry of Commerce and Industry should, however, make a fresh assessment of the capacity under the present operating conditions.
- (5) Some liberalisation of import control policy with respect to the types and sizes of bearings not produced in the country is possible, without serious detriment to the interests of the domestic industry. Government should draw up a list of the types and sizes which are likely to serve as substitutes for those produced in the country and allow imports of such types and sizes only to the extent needed to meet the genuine requirements of the consumers. Imports of other types and sizes which are not produced in the country should subject to exigencies of foreign exchange be licensed liberally.
- (6) The quality of N.B.C. bearings is acceptable to consumers generally, but they require improvement to give noiseless performance, which is desirable particularly in the case of fans.

- (7) The Company should introduce a proper system of costing as early as possible.
- (8) The Company should endeavour to maintain reasonable stocks of the various sizes of ball bearings normally required by its regular customers.
- (9) The company should immediately review its prices and effect necessary reductions to bring them in fair relation to its costs.

2. Government accept recommendation (1) and will introduce the necessary legislation in Parliament in due course. Steps are being taken to bring into force immediately the higher protective duty of 94½% *ad valorem* on adapter bearings not exceeding 2" bore diameter assessable under I.C.T. No. 72(37).

3. Government accept recommendation (2). Besides the air-worthiness affidavit and the release note referred to therein, Customs Houses will be free to insist on any further independent evidence to show that imported bearings for which the concessional rate of duty is claimed are of a type which is exclusively used in aircraft.

4. Recommendation (3) is under examination. Government also accept recommendations (4) and (5) and will take steps to implement them as far as possible.

5. Attention of the National Ball Bearing Co. Ltd., Jaipur, is invited to recommendations (6) and (8).

6. As regards recommendations (7) and (9), the Government of India has viewed with extreme disfavour that the National Bearing Company Ltd. has not yet introduced a proper system of accounting; on the other hand, it has raised its prices recently, which in some cases are higher than the fair ex-works prices by more than 60 per cent. The industry is protected by a high tariff and also derives considerable benefit through import control. As the sole producer of ball bearings in the country, the National Bearing Co. has a special obligation to maintain its records in sufficient detail and also to keep its prices in fair relation to the cost of production, so that the consumer is satisfied that the Company is not exploiting its monopolistic position. The industry is, therefore, advised to take necessary steps to implement recommendations (7) and (9) without any further loss of time otherwise, Government will have to adopt remedial measures, which may include further liberalisation of imports, the introduction of price control or any other steps that may seem appropriate.

ORDER

ORDERED that a copy of the Resolution be communicated to all concerned and that it be published in the Gazette of India.

N. SUBRAHMANYAM,
Joint Secretary to the Government of India.

REPORT ON THE CONTINUANCE OF PROTECTION TO THE BALL BEARINGS INDUSTRY

Previous tariff inquiry

1. The claim of the ball bearings industry to protection and/or assistance was first examined by the Tariff Commission in 1952. The Commission then recommended that the industry should be granted protection for a period of two years. The scheme of protection recommended was as follows:—

- (i) The existing revenue duties on ball bearings not exceeding 2" bore diameter adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters should be converted into protective duties at the same rates ;
- (ii) Ball bearings of all kinds not exceeding 2" bore not otherwise specified, should also be brought under the scheme of protection and should be assessable to a protective duty of 94½ per cent. *ad valorem* ;
- (iii) The rate of duty on adapter bearings not exceeding 2" bore diameter which are specially designed for use exclusively with power-driven machinery should be increased to 10 per cent. *ad valorem* and converted into protective duty.

The Government of India in the Ministry of Commerce and Industry by their Resolution No. 18(4)-T.B./52, dated 10th January, 1953, accepted the above recommendations and protection was granted to the industry up to 31st December, 1954. In consultation with the Tariff Commission, protection to the industry was extended up to 31st December, 1955 by the Indian Tariff (Second Amendment) Act, 1954 and later up to 31st December, 1956 by the Indian Tariff (Third Amendment) Act, 1955.

Present inquiry

2. The present inquiry was under Section 11(e) read with Section 13 of the Tariff Commission Act, 1951, under which the Commission is empowered to inquire into and report on any further action required in relation to the protection granted to an industry with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

Recommendations made in 1952 and implementation thereof

3. In its previous report, the Commission had recommended that Government should consider seeking release from their commitments under the General Agreement on Tariffs and Trade (GATT) in regard to the import duty on ball bearings for use with shaftings and adapter bearings. Government negotiated with the contracting parties to the Agreement and obtained release from their commitments in regard to both the items. The Commission's recommendations in regard to import control policy and the manner in which statistics of imports should be maintained were also accepted by Government and necessary steps were taken to implement them.

Besides, the Commission recommended that the industry should continue its efforts to maintain high standards of quality for its products and make arrangements for carrying out accelerated life tests for its bearings. In consultation with the Indian Standards Institution the Company has taken steps to carry out accelerated life tests. The Company has also informed us that it has taken steps to implement the Commission's recommendation in regard to maintenance of stocks, the agency for distribution, speedier deliveries and technical assistance to the consumers. In regard to the deficiencies in its costing system, the Company has submitted that it has now introduced a standard costing system. Some of these subjects are further discussed in the relevant sections later in the report.

4.1. On 9th August, 1954 the Commission issued a press note inviting firms, persons and associations interested in this industry or in industries which use its products, to obtain copies of the relevant questionnaires from the office of the Commission and to submit replies thereto. A special questionnaire was sent to the National Bearing Co. Ltd., Jaipur, the only producer of ball bearings in the country. Questionnaires were also issued to the known importers, dealers and consumers of ball bearings. A list of those to whom the questionnaires were issued and from whom detailed replies or memoranda were received is given in Appendix I.

Method of inquiry

4.2. The Chief Industrial Adviser, Ministry of Commerce and Industry (Development Wing) was requested to furnish the Commission with a detailed memorandum on the present position of the industry and the plans for further development. The Collectors of Customs at the principal ports were asked to furnish the latest c.i.f. prices of comparable types and sizes of imported ball bearings. The First Secretary (Commercial) to the Embassy of India in Japan, Tokyo, was requested to give the current f.o.b. and c.i.f. prices (Indian Port) of ball bearings of Japanese origin. The Director-General of Supplies and Disposals was addressed for information regarding Government purchases of ball bearings (indigenous and imported) during the last three years. The Chief Secretary to the Government of Rajasthan, Jaipur was addressed for the views of the State Government regarding the progress and present position of the industry. The Indian Standards Institution was approached for information regarding standards, if any, for indigenous ball bearings.

4.3. Shri K. R. Damle, Chairman and Shri B. N. Adarkar, Member, visited the factory of National Bearing Co. Ltd., at Jaipur on 29th February, 1956. Shri N. Krishnan, Senior Cost Accounts Officer, visited the factory of National Bearing Company at Jaipur in August, 1955 for the purpose of cost investigation.

4.4. A public inquiry into this industry was held at the Commission's office on 21st and 22nd February, 1956. A list of persons who attended the inquiry is given in Appendix II. Discussions were also held separately with the representatives of the Ball Bearing Dealers' Association, Calcutta on the afternoon of 22nd February, 1956 at the request of the Association.

Scope of the inquiry 5.1. The scope of the present inquiry is limited to the same types and sizes of bearings as were granted protection in 1953. The protected types are described as follows in the Indian Customs Tariff, First Schedule (Import Tariff) 40th issue :—

Item No.	Name of article
72 (35)	. Ball bearings of all kinds not exceeding 2" bore diameter adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters.
72 (36)	. Ball bearings of all kinds not exceeding 2" bore diameter not otherwise specified.
72 (37)	. Adapter bearings not exceeding 2" bore diameter which are specially designed for use exclusively with power driven machinery.

5.2. The National Bearing Co. represented that axle-boxes for locomotives should also be included in the scope of the present inquiry. The representative of the Company, however, admitted that axle-boxes fell under the category of roller bearings. As the Government had decided to exclude roller bearings from the scope of the inquiry in 1952 [*vide* endorsement No. I. T. (13)/50, dated 24th April, 1952] and as there was no fresh reference from Government since then, it was not possible to include axle-boxes in the present inquiry.

5.3. It was represented to us on behalf of the aircraft industry that ball bearings used in the aircraft should be excluded from the scheme of protection to the industry, as these bearings were not produced in the country. The National Bearing Company admitted that it was not producing ball bearings for the aircraft industry though the Company is examining the possibilities of producing such bearings. We are not satisfied that the Company will be in a position to undertake the manufacture of aircraft bearings in the near future. Aircraft bearings have to conform to very rigid requirements with regard to dimensions, running capacity and finish. These extra requirements result in higher cost which prohibits their use in other industries. We, therefore, agree that ball bearings used in the aircraft can be excluded from the scheme of protection without detriment to the domestic industry and recommend that when the imports of aircraft bearings are covered by airworthiness affidavits or release notes, such imports should be exempted from the payment of so much of the duty leviable thereon as is in excess of the duty specified under I. C. T. item 76.

Demand 6.1. In 1952, no reliable estimate of demand for ball bearings was available to the Commission. On the basis of the limited information available to it, the Commission estimated the annual demand at about 9,00,000 bearings. The Commission pointed out that it was not able to obtain any clear indication of the trend of demand to prepare an estimate for the future, as several consuming industries were experiencing slackness of demand for their products at that time. Since then, the demand for ball bearings has been increasing owing to the steady expansion of the industrial activity.

6.2. During this inquiry we received estimates of demand from various parties. Those estimates showed considerable variations. For example, the National Bearing Company estimated the demand for

ball and adapter bearings up to 2" bore diameter at about 8 lakhs while the Mill Gin Merchants' Association, Bombay, estimated the demand for bearings of corresponding dimensions at 1.9 million. The various estimates received were discussed at the public inquiry and a clearer picture of the industrywise demand for ball bearings was attempted. Our estimates of demand for bearings up to 2" bore diameter, on the basis of the information received by us are given below :—

Ball Bearing up to 2" bore diameter

	Current No.	Future (1960-61) No.
Electric Fans	720,000	1,080,000
Electric Motors	72,000	1,80,000
Pumps	81,600	206,400
Machine Tools	9,000	27,000
Ring Frames	7,200	33,600
Carding Engines	3,000	14,400
Automobiles	360,000	6,00,000
Cycle Rickshaws	24,000	24,000
Sugar machinery	600	3,000
Chaff cutters	50,000	50,000
Flour Mills	50,000	50,000
Miscellaneous including adapter bearings	222,600	231,600
TOTAL	1,600,000	2,500,000

7. The National Bearing Co. Ltd., Jaipur, is the only unit which is producing ball bearings in the country. In its previous Report the Commission estimated the capacity of the Jaipur factory at about 600,000 bearings on single shift basis. That estimate was based on its capacity to turn out rings on its automatic and semi-automatic machines for the combination of sizes and types then produced. It was admitted that the larger the number of types and sizes of rings produced, the greater would be the loss in production due to change of tools and setting up time. It was also agreed that in practice the output from the plant would be reduced owing to rejections in processing, which are normally 5 per cent., 9 per cent. and 1 per cent. in the current, Grinding and Hardening departments respectively. The Company claims to have expanded its range of production from 46 sizes in 1952 to 147 sizes and it now produces additional items like Double Row Self Aligning, Angular contact and thrust type bearings, semi-special and special bearings for automobiles and roller bearings and railway axle-boxes. Taking into account the types and sizes produced at present, the Company has estimated its annual capacity at 480,000 bearings per shift. This estimate of capacity requires further examination as it has a bearing on

Rated Capacity

the import control policy. We recommend that the Development Wing in the Ministry of Commerce and Industry should make a fresh assessment of the capacity of the National Bearing Company under the present operating conditions.

8.1. The production of ball bearings and adapter bearings up to 2" bore diameter from 1952 to 1955 is given below :

	1952 No.	1953 No.	1954 No.	1955 No.
I. Ball Bearings				
(i) Up to 1" bore diameter	381,904	576,533	617,138	721,394
(ii) Above 1" and up to 2" bore diameter	32,838	66,603	80,988	75,645
II. Adapter bearings	2,027	5,240	6,790	5,390
TOTAL	416,769	648,376	704,916	802,429

8.2. The Company has made steady progress since 1952. Its production in 1955 was nearly double that of 1952. The Company is now producing a few sizes of ball bearings above 2" bore diameter, roller bearings and axle-boxes for locomotives. The actual production of these types is given below :—

	1954 No.	1955 No.
I. Ball bearings above 2" bore diameter	85	1,709
II. Roller bearings	3,219	6,212
III. Axle-boxes	61	844
TOTAL	3,365	8,765

8.3. The Company is aiming at a production of 916,800 bearings during the current year, the break-up of which is given below :—

	No.
(a) Ball bearings.	
(1) Up to 1" bore diameter	812,000
(2) Above 1" and up to 2" bore diameter	53,400
(3) Above 2" bore diameter	3,900
(b) Adapter bearings	29,000
(c) Roller bearings	18,500
TOTAL	916,800

8.4. *Plans for expansion.*—The Company informed us that its plans to expand its capacity for the production of ball bearing to 900,000 a year on single shift basis and to manufacture 42,000 taper and special roller bearings had been approved by Government.

8.5. A statement showing details of the actual production of ball bearings during each of the years 1952, 1953, 1954 and 1955 and the estimated future production is given in Appendix III.

9. Opinions received by us regarding the quality of domestic bearings indicate that they are acceptable to consumers generally. Preference for imported bearings still exists where service conditions require high precision bearings. One complaint that we received from the Fan Makers' Association of India was in regard to the noise that the N.B.C. bearings make when fitted to small fans. The representative of the National Bearing Company admitted that their bearings give a little more noise than some of the imported makes but he contended that it should not be taken as a serious defect as it did not affect the performance of the bearing. He also stated that the noise in a fan need not always be due to the bearings but might be due to various other factors. There seems no doubt, however, that the N.B.C. bearings require improvement to give noiseless performance which is desirable, particularly in the case of fans.

10.1. Imports of ball bearings are being recorded in the Accounts relating to the Foreign Trade and Navigation of India since April, 1953. In the published Accounts, the value of imports alone is given. In accordance with a recommendation of the Commission, the Director-General of Commercial Intelligence and Statistics is collecting information in regard to imports of ball bearings by quantity also. But that information is incomplete. The following statement shows the imports of ball bearings in value since April, 1953.

	1953-54	1954-55	1955-56 (April-January)
	Rs.	Rs.	Rs.
<i>Ball bearings—</i>			
Up to 1" bore diameter	11,08,283	9,01,927	4,27,098
Between 1" and 2" bore diameter	40,84,086	37,96,774	15,69,065
Above 2" bore diameter	29,03,357	32,74,050	9,58,740
TOTAL	80,95,726	79,72,751	29,54,903

10.2. The import control policy in respect of ball bearings for the different licensing periods from January—June 1952 to January—June 1956 is summarised below. The details of the policy are given in Appendix IV. A statement showing the types of ball bearings, imports of which were restricted during the period January—June 1956, is given in Appendix V.

Table Showing Summary of Import Control Policy

Description	1952		1953		1954		1955		1956						
	Jan.—June	July—December	Jan.—June	July—December	Jan.—June	July—December	Jan.—June	July—December	Jan.—June	July—December					
No. of Quota sizes	No. of Quota sizes	No. of Quota sizes	No. of Quota sizes	No. of Quota sizes	No. of Quota sizes	No. of Quota sizes	No. of Quota sizes	No. of Quota sizes	No. of Quota sizes	No. of Quota sizes					
%	%	%	%	%	%	%	%	%	%	%					
(A) Restricted sizes—															
(i) Up to 1" 33	30	20	10	20	5	28	10M	31	10M	35	5	40	5	42	5
(ii) Above 1" and up to 2"	...	14	6½	14	6½	26	10	30	10	39	5	55	5	59	5
(iii) Above 2"	5	20M.G. 100M.S.	5	10	5	5	13*	5	13*	5
(B) Non-restricted sizes—															
(i) Up to 1"	...	70	...	...	50	...	100M	...	75M	...	33½	...	33½	...	33½
(ii) Above 1" and Up to 2"	...	O.G.L. Soft.	...	...	50	...	100M	...	75M	...	20	...	20	...	20
(iii) Above 2"	...	O.G.L. Soft.	...	O.G.L. Soft.	20 G 100S	...	20M.G. 100MS	...	100M	...	33½	...	*33½ †100	...	*33½ †100

Norm.—*Import policy for Ball Bearings above 2" and up to 3" bore diameter.
 †Import policy for Ball Bearings above 3" bore diameter.

10.3. The present import control policy has no doubt been of considerable benefit to the domestic industry. The Commission, however, has received representations from the dealers and consumers that the policy is too restrictive and has prevented sufficient stocks of the various types and sizes of bearings from being built up, thereby leading to scarcity and high prices. The present policy involves severe restrictions on import of certain categories of bearings not produced in the country. The apparent justification for imposing these restrictions is to prevent excessive imports of bearings which can serve as substitutes for those indigenously produced. Instances of such evasion have actually occurred. We have examined the matter and have come to the conclusion that some liberalisation of the import control policy with respect to the types and sizes of bearings not produced in the country is possible without serious detriment to the interests of the domestic industry. Government should draw up a list of types and sizes which are likely to serve as substitutes for those produced in the country and restrict imports of such types and sizes to the extent needed to meet genuine requirements. During the course of this inquiry, certain leading importing firms expressed their readiness to co-operate with Government in preparing such a list. Imports of other types and sizes which are not produced in the country should, subject to the exigencies of foreign exchange, be licensed liberally.

11. The protected items of ball bearings and adapter bearings are assessed to duty under Items No. 72(35), 72(36) and 72(37) of the Indian Customs Tariff. The rate of duty is 94½ per cent. *ad valorem* on ball bearings under Items Nos. 72 (35) and 72(36) and 10 per cent. *ad valorem* on adapter bearings under Item No. 72(37). The relevant extract from the First Schedule to the Indian Customs Tariff (Fortieth Issue) is given below :—

Serial No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The U.K.	A British colony	Burma	
1	2	3	4	5	6	7	8
72(35)	Ball bearings of all kinds not exceeding 2" bore diameter adapted for use as parts and accessories of motor vehicles other than motor cycles and motor scooters.	Protective.	94½ per cent <i>ad valorem</i>.	..	..	..	*December 31st, 1955.

1	2	3	4	5	6	7	8
†72(36)	Ball bearings of all kinds not exceeding 2" bore diameter not otherwise specified.	Protective	94½ per cent. <i>ad valorem</i> plus ¼th of the total duty.	..	..	..	*December 31st, 1955.
†72(37)	Adapter bearings not exceeding 2" bore diameter which are specially designed for use exclusively with power driven machinery.	Do.	10 per cent. <i>ad valorem</i> plus ¼th of the total duty.	..	..	..	*December 31st, 1955.

*The duration of protective duty has been further extended to 31st December, 1956.

†Please see the notes on the next page regarding these items.

NOTES

Item No.

- 72(36) —(1) Under Government of India Ministry of Finance (Revenue Division), Notification No. 13-Customs, dated the 28th February, 1953, as amended subsequently by Notification No. 23-Customs, dated the 21st April, 1953 and No. 25-Customs, dated the 27th February, 1954, the articles specified in column 2 of the Schedule noted below are exempt from the payment of so much of the additional duty of Customs leviable thereon under any law for the time being in force as is specified in column 3, where such additional duty is in addition to the duty of Customs leviable thereon under the First Schedule to the Indian Tariff Act, 1934, or under the Schedule read with any Notification of the Government of India for the time being in force :

SCHEDULE

Serial No.	Name of article	Extent of exemption
1	Adapter bearings up to 2" bore diameter which are specially designed for use exclusively with power driven machinery.	The whole.
2	Ball bearings of all kinds not exceeding 2" bore diameter not otherwise specified falling under item 72(36) of the First Schedule to the Indian Tariff Act, 1934.	The whole.

12. A statement in Appendix VI shows the c.i.f. prices of imported ball bearings adopted by us for the purpose of comparison with the fair ex-works prices of indigenous bearings. Since the U. K. Sweden and West Germany are the principal sources of supply, we have adopted the c.i.f. prices relating to imports from these sources. The prices of Japanese bearings are lower, but we understand that they are inferior in quality and are not used as original equipment.

13.1. In its last Report, the Commission pointed out certain difficulties in estimating the cost of production and fair ex-works prices of the bearings produced at the Jaipur factory and recommended that the Company should take early steps to introduce a proper system of costing. We regret to note that the Company has not yet implemented this recommendation. As the sole producer of bearings in the country, the industry has an obligation to maintain its records in sufficient details to convince the consumer that its costs are kept under strict control, particularly when the industry is protected by a high tariff and drives considerable benefit through import control as well. We therefore, reiterate our earlier recommendation that the Company should introduce a proper system of costing as early as possible.

13.2. On the basis of the cost data made available to us for the period April—December, 1955, we have prepared estimates of the future fair ex-works prices for 20 sizes of bearings up to 2" bore diameter and 2 sizes of adapter bearings up to 2" bore diameter which would constitute 89 per cent. of the total estimated production in terms of numbers and 72 per cent. in terms of production minutes. The estimates are based on an annual output of 916,800 bearings. We have given the costs of production and fair ex-works prices of the selected types and sizes in Appendix VII. Details of the cost estimates are given in a confidential enclosure to this Report.

13.3. *Cost of raw materials.*—The costs of raw materials for the various bearings have been calculated by taking the latest available prices.

13.4. *Convention charges.*—The conversion charges have been estimated on the basis of the data for April—December, 1955 with suitable adjustments. The Company claimed higher expenses under electricity due to the anticipated withdrawal of a concessional rate which it is receiving at present. As the concessional rate is still in force, we have disallowed this claim. If and when the rate is actually withdrawn, the fair ex-works prices will need adjustments on account of this factor.

13.5. *Depreciation.*—We have provided depreciation at normal income-tax rates, taking into account the additions to fixed assets made after 31st March, 1955.

13.6. *Interest on working capital.*—This has been allowed at the rate of 4½ per cent. per annum on six months' cost of production.

13.7. *Return on block.*—The original value of the block including the additions made during April—December, 1955 amounts to 74,16,868. Return has been allowed at 10 per cent. on this amount.

13.8. *Variable royalty.*—The royalty payable to Messrs. Hoffmann Manufacturing Co., Ltd., U.K. works out to 4.46 per cent. (inclusive of tax) on the net selling prices of the Company. This has been provided.

14.1. The statement in Appendix VI gives a comparison of the fair ex-works prices of 10 selected sizes of indigenous bearings with the landed costs, ex-duty of the corresponding sizes of imported bearings. The statement shows the duty required under each size separately and also for the groups (i) up to

The Commission's estimate of the cost of production and fair ex-works prices of indigenous bearings

Measure of protection

1" bore diameter and (ii) above 1" and up to 2" bore diameter. The average rate of import duty indicated for bearings up to 1" bore diameter is 111.45 per cent. and for those above 1" and up to 2" bore diameter 175.11 per cent. The average duty for all the 20 sizes works out to 115.94 per cent. *ad valorem*. A similar comparison has been given in the same statement for two sizes of adapter bearings. The average rate of duty indicated for these bearings is 283.13 per cent. *ad valorem*.

14.2. The rates of duty indicated in Appendix VI are much higher than the existing rates mentioned in paragraph 11 above. The industry is, however, receiving a substantial measure of protection at present as an incidental consequence of the import restrictions imposed on balance of payments grounds. We do not, therefore, consider it necessary to recommend an increase in the existing rates of duty except in the case of adapter bearings not exceeding 2" bore falling under I.C.T. Item 72(37). The duty on this item was maintained at 10 per cent. at the last inquiry because of certain GATT commitments which have since been terminated. We recommend that this duty should now be raised to 94½ per cent. *ad valorem* so as to bring it on par with that applicable to the other protected types. Although the industry has made considerable progress since the last inquiry, its costs of production are still very high and it will, therefore, need protection for a fairly long period. We, therefore, recommend that the duration of protective duties under I.C.T. items 72(35), 72(36) and 72(37) should be extended to 31st December, 1960.

15. The Comparison in its previous Report had recommended **Delivery period** that the National Bearings Company should make every effort to expedite deliveries of their bearings and for this purpose maintain adequate stocks at all principal consuming centres, particularly of those bearings which are included in the restricted categories for purposes of import trade control. The Company claims to have implemented this recommendation. It has informed us that it has been holding adequate stocks of all sizes in the principal cities for immediate delivery. During the public inquiry, however, complaints were voiced regarding protracted deliveries of ball bearings. Documentary evidence was produced in support of these allegations. We have examined this matter carefully, and we feel convinced that some of the grievances of the consumers in this connection are legitimate. The evidence received by us shows that in some cases, deliveries were delayed by five to six months. We also understand that the Company manufactures certain special sizes against specific orders and does not maintain stocks of them. We can understand the difficulties of the Company, when it receives orders for new sizes. It can have no excuse for delaying deliveries of restricted items, as it has been assured of the market. By now, the Company should know the demand for restricted items and should be expected to maintain adequate stocks of these sizes at important centres of consumption. We, therefore, reiterate the recommendation of the Commission in 1952 that deliveries of indigenous ball bearings should be expedited and that the Company should endeavour to maintain reasonable stocks of the various sizes of ball bearings that are in general demand and of those normally required by the regular customers.

16. Immediately after protection was granted to the industry In 1953, the Company revised its prices and brought them in line with their costs. The Commission then received some complaints that the prices charged were excessive. On examination it was found that the Company had added only selling and certain incidental expenses to the fair ex-work prices estimated by the Commission and that the revised prices were reasonable. From 1st December, 1955, the Company has increased its prices on most sizes. The statement given in Appendix VIII shows the Company's current selling prices and the selling prices of imported bearings. Of the 23 sizes examined, in 14 cases the Company's prices are lower than those of the imported bearings, in 5 cases they are higher and in 4 cases equal. It will, however, be seen from the same statement that in 14 out of the 23 cases the selling prices are higher than the fair ex-works prices by more than 60 per cent. The Company is selling below cost the two sizes of U.T. bearings shown in the statement. The weighted average difference between the selling prices and fair ex-works prices of the 23 sizes is 55.56 per cent. It may be mentioned that in estimating the fair ex-works prices, we have allowed the usual rate of return, but not the selling and distribution expenses which should be added to obtain the fair selling prices. The Company maintains that its present prices are not excessive, considering that it has so far paid no dividend on its ordinary share capital, that the dividend on its preference shares is still in arrears, and that there are also heavy arrears of depreciation. During the last two years, however, the Company's financial position has shown a distinct improvement, and a substantial increase in output is expected to take place in the current year. We do not think, therefore, that a margin of 55 per cent. over fair ex-works prices can be regarded as justifiable in the present circumstances. We, accordingly, recommend that the Company should immediately review its prices and effect necessary reductions to bring them in fair relation to the costs.

17. The industry has asked for relief in respect of import duties on the raw materials required for the manufacture of ball bearings. The principal raw material used by the industry is high carbon chromium steel which is assessed under item No. 63(30) of the Indian Customs Tariff Schedule. The standard rate of duty is 44 1/10 per cent. *ad valorem*, and the preferential rate for British manufacture is 31½ per cent. *ad valorem*. As the domestic cost of ball bearings is very high, and the industry is now wholly dependent on imports for its requirements of high carbon chromium steel, a reduction in the import duty on this essential material will be of great help to the industry. The duty has become especially burdensome because of the recent rise in the prices of foreign steel. We understand that the manufacturers of small tools have been allowed to import their requirements of special steels at the concessional rates of 5¼ per cent. *ad valorem* preferential and 15¼ per cent. *ad valorem* standard. We think that the same concession should be extended to the ball bearings industry. We, accordingly, recommend that high carbon chromium steel required for the manufacture of ball bearings should be assessed to duty at the concessional rates applicable to special steels imported for the manufacture of small tools.

18. Our conclusions and recommendations are summarized below :—
Summary of conclusions and recommendations.

(1) The scope of the present inquiry is limited to ball bearings up to 2" bore diameter and adapter bearings up to 2" bore diameter, as specified in I.C.T. items 72(35), 72(36) and 72(37). [Paragraph 5.1]

(2) Imports of aircraft bearings covered by airworthiness affidavits or release notes should be exempted from the payment of so much of the duty leviable thereon as is in excess of the rate specified under I.C.T. Item 76. [Paragraph 5.3]

(3) The domestic demand for bearings up to 2" bore diameter is estimated at 1.6 million at present. It is expected to increase to approximately 2.5 million during the Second Plan period. [Paragraph 6.2]

(4) The National Bearing Company has estimated its annual capacity at 480,000 bearings per shift. The Development Wing in the Ministry of Commerce and Industry should, however, make a fresh assessment of the capacity under the present operating conditions. [Paragraph 7]

(5) Domestic production of ball bearings was 811,114 in 1955 as compared with 416,769 in 1952. Production in 1956 is expected to be 916,800. [Paragraphs 8.1, 8.2 & 8.3]

(6) The quality of N.B.C. bearings is acceptable to consumers generally, but they require improvement to give noiseless performance which is desirable particularly in the case of fans. [Paragraph 9]

(7) Imports of ball bearings in 1953-54, 1954-55 and April/January 1955-56 were valued at Rs. 80,95,726, Rs. 79,72,751 and Rs. 29,54,903 respectively. [Paragraph 10]

(8) Some liberalisation of import control policy with respect to the types and sizes of bearings not produced in the country is possible without serious detriment to the interest of the domestic industry. Government should draw up a list of the types and sizes which are likely to serve as substitutes for those produced in the country and allow imports of such types and sizes only to the extent needed to meet the genuine requirements of the consumers. Imports of other types and sizes which are not produced in the country should, subject to exigencies of foreign exchange, be licensed liberally. [Paragraph 10.3]

(9) The Company should introduce a proper system of costing as early as possible. [Paragraph 13.1]

(10) The protective duty on ball bearings up to 2" bore diameter (other than adapter bearings) assessable under I.C.T. items 72(35) and 72(36) should be maintained at the existing rates. The duty on adapter bearings assessable under item 72(37) should be raised to 94½ per cent. *ad valorem* so as to bring it on par with the other protected types of ball bearings. The duration of these protective duties should be extended to 31st December, 1960. [Paragraph 14.2]

(11) The Company should endeavour to maintain reasonable stocks of the various sizes of ball bearings normally required by its regular customers. [Paragraph 15]

(12) The Company should immediately review its prices and effect necessary reductions to bring them in fair relation to its costs. [Paragraph 16]

(13) High carbon chromium steel required for the manufacture of ball bearings should be assessed to duty at the concessional rates applicable to special steels imported for the manufacture of small tools. [Paragraph 17]

19. We wish to express our thanks to the producers, importers, **Acknowledgments** consumers, Associations and Government Departments who furnished detailed information to us in connection with this inquiry and whose representatives tendered evidence before us. Our thanks are also due to Shri S. C. Banerjee, Deputy Development Officer, Development Wing of the Ministry of Commerce and Industry, for his assistance in connection with this inquiry.

K. R. DAMLE,
Chairman.

B. N. ADARKAR,
Member.



S. K. BOSE,
Secretary.

BOMBAY ;
The 10th May, 1956.

APPENDIX I

(Vide Paragraph 4.1)

List of firms and bodies to whom the Commission's questionnaires/letters were issued and from whom replies/memoranda were received

*Indicates those who sent detailed replies or adequate information.

†Indicates those who did not reply in detail.

‡Indicates those who are not interested.

I. PRODUCERS :

*National Bearing Co. Ltd., Jaipur, Rajasthan.

II. (i) IMPORTERS:

1. Motiram Agarwal & Co. Ltd., 137, Canning Street, Calcutta.
2. The Ballmann Trading Co., Netaji Subhas Road, Calcutta.
3. Bharat Trading Co., 43, Nagdevi Cross Lane, Bombay-3.
4. Binny & Co., Armenian Street, G.T., Madras.
5. Biyani & Sons Ltd., 137, Canning Street, Calcutta.
6. The Bombay Company Ltd., 18-A, Brahourne Road, Pollock House, Calcutta-1.
7. Burma Cycle Trading Co., 164, Broadway, G.T., Madras-1.
- *8. The Central Trading Co., 137, Canning Street, Calcutta-1.
9. Chimanlal Desai & Co., 54, Bentinck Street, Calcutta.
10. Dhirajlal & Co., 62, Princess Street, Bombay-2.
11. Eastern Importers Syndicate, 91, Netaji Subhas Road, Calcutta.
- †12. Rane (Madras) Ltd., 5, Patullos Road, Mount Road, Madras.
13. Girdharilal & Co., 89, Netaji Subhas Road, Calcutta.
14. Globe Agencies, 137, Canning Street, Calcutta.
- *15. Greaves Cotton & Co., Ltd., 1, Forbes Street, Fort, Bombay.
- †16. Guest, Keen, Williams Ltd., 41, Chouringhee Road, Calcutta-16.
17. Hindustan Ball Bearing Corporation, 137, Canning Street, Calcutta-1.
- †18. Williams Jacks & Co., Ltd., 16, Netaji Subhas Road, P. O. Box 369, Calcutta-1.
19. Jagdish Machinery Stores, 38, Netaji Subhas Road, Calcutta.
20. Jayems Engineering Co., Warden House, Sir P.M. Road, Fort, Bombay.
- *21. Joshina & Thakker Engineering Stores, Tulsi Falia, Station Road, Surat.
22. Kamlashankar P. Joshi & Co., 72/80, Negdevi Cross Lane, Bombay-3.
- †23. Machine Tools (India) Ltd., Stephen House, Dalhousie Square, Calcutta-1.
- *24. Roberts, Mclean & Co., Ltd., 31, Netaji Subhas Road, Calcutta.
- *25. Mclood & Co., Ltd., 3, Netaji Subhas Road, Post Box 78, Calcutta.
26. Noursell & Co. Ltd., 41-A, Free School Street, Calcutta-16.
27. National Bearing Co. Ltd., 1-A, Vansittart Row, Calcutta.
28. Parween & Co., 138, Canning Street, Calcutta.
- *29. Ransome & Marles Bearing Co. Ltd., Newark-on-Trent, England.
- *30. S. K. F. Ball Bearing Co. Ltd., Mustafa Building, 19, Sir P.M. Road, Fort, Bombay-1.
- *31. P. B. Shah & Co. Ltd., 34, Netaji Subhas Road, Calcutta.
- *32. Tata Iron & Steel Co. Ltd., Jamshedpur.
33. Textile Machinery Corporation Ltd., 8, Royal Exchange Place, Calcutta.
34. Tirathadas Keshoram, 130, Narayan Dhuru Street, Bombay-3.

35. G. G. Vaswani & Co., 15, Ravendra Mansion, 194, Dinsha Wacha Road, Churchgate Reclamation, Bombay-1.
- *36. Damodar Das Jaichand Aggarwal, Railway Road, Batala.
37. Massey Harris Ferguson (India) Ltd., P.B. No. 3, Bangalore.
38. Swiss Locomotive & Machine Works, Ballard Estate, Bombay.
- †39. P. B. Rodda & Co., Ltd., 2, Wellesly Place, Calcutta-1.
40. Blackwood Hodge, Lotus, House, Marine Lines, Bombay.
41. Edward & Co., 35, Chittaranjan Avenue, Calcutta.
42. E. W. Stevens & Co. Ltd., Ballard Road, Bombay.
43. United Provinces Commercial Corporation, 53, Radhabazar Lane, Calcutta.
44. New Punjab Traders (India) Ltd., 138, Canning Street, Calcutta.
45. Motor & Machinery Manufacturers Ltd., 81, Chittaranjan Avenue, Calcutta.
46. B. Chowdhury, Indian Globe Chambers, Fort Street, Bombay.
- *47. C. C. Vaswani & Co., 11, Habib Court, Causaway, Bombay.
48. P. H. Wadia & Sons, P. O. Box No. 27, Rajkot.

II. (ii) ASSOCIATIONS (IMPORTERS) :

1. Ball Bearing Dealers' Association, 137, Canning Street, Calcutta-1.
2. Iron, Steel and Hardware Merchants' Chamber of India, K.T. Building, Broach Street, opp. Victoria Docks, Blue Gate, Bombay-9.
3. Madras Cycle Importers' Association, No. 2/9, Broadway, G.T., Madras.
- *4. The Mill Gin Stores Merchants Association, 109—111, Nagdevi Street, Bombay-3.
5. Bombay Business Association, Damodar Bhavan, Vithalbhai Patel Road, Bombay-4.
- *6. Bharat Chamber of Commerce, Imperial Bank Building, Calcutta.

III. (i) CONSUMERS :

1. Amin Chand and Sons, Village & P.O. Landra, Phillaur, Jullundur District.
2. Agricultural Industries (Regd.), Batala (East Punjab).
3. Deccan Engineering Ltd., Madhavnagar (M. & S. M. Railway).
4. New Zamindar Foundry (Regd.), G.T. Road, Batala.
5. Corporated Engineers (India) Ltd., 7, Chittaranjan Avenue, Calcutta.
6. Lilluah Iron Works, 41, Chowringhee Road, Calcutta-16.
7. Atlas Cycle Industries Ltd., Sonapat (Punjab).
- *8. Hind Cycle Ltd., 250, Worli, Bombay-18.
- *9. T.I. Cycle (India) Ltd., Swastik House, 106, Armenian Street, G.T., Madras.
- *10. Cooper Engineering Ltd., Satara Road, Satara District, Bombay State.
11. Khushalani Russel New Berry & Co., Ltd., Warden House, Sir P.M. Road, Fort, Bombay.
12. Kirloskar Oil Engines Ltd., Elphinston Road, Kirkee, Poona-2.
- †13. Kulko Engineering Works Ltd., Ichalkaranji, Kolhapur District, Bombay State.
14. Acme Manufacturing Co. Ltd., Antop Hill, Wadala, Bombay-19.
15. Bharat Electrical Industries Ltd., 6-A, S.N. Banerjee Road, Calcutta.
16. Calcutta Electrical Manufacturing Co. Ltd., 33, Netaji Subhas Road, Calcutta.
- *17. Crompton Parkinson (Works) Ltd., Haines Road, Worli, Bombay-18.
- *18. The General Electric Co. of India (Manufacturing) Ltd., 58, Taratalla Road, Garden Reach, Calcutta-24.
19. India Paramount Industries, G.T. Road, Amritsar.
20. India Electric Works Ltd., Diamond Harbour Road, Calcutta.
- *21. Jaura Engineering Works, Azad Nagar, Amritsar.
22. Jay Engineering Works Ltd., 183-A, Prince Anwar Shah Road, Dhakuria, Calcutta-31.
23. Luxmi Engineering Works, Hide Market, G.T. Road, Amritsar.
24. Matchwal Electricals (India) Ltd., Subzi Mandi, Delhi.

25. Murray & Co., Block No. 9, Swadeshi Mills Estate, New Queen's Road, Bombay.
26. National Electrical Manufacturing Co., Near Railway Station, Patiala.
27. Polar Electrical Engineering Co. Ltd., Room 93, 14/2, Old China Bazar Street, Calcutta.
28. Raj Electrical Works Ltd., 5, Daryaganj, Delhi.
- *29. Alcock, Ashdown & Co., Defence Works, Mazagaon, Bombay.
- *30. Angus Engineering Works, P.O. Angus, Hoogly District, West Bengal State.
- *31. Argus Engineering Co. Ltd., Peclamedu Post, Coimbatore, S. India.
- *32. Associated Electrical Industries Manufacturing Co., Ltd., Crown House, 6, Mission Row, Calcutta-1.
33. Bharat Bijli Ltd., Udyog Nagar, Bombay-22.
- *34. British India Electric Construction Co. Ltd., 21, Netaji Subhas Road, Calcutta.
35. Eastern Eletrical Co., Ltd., Singanallur P.O., Coimbatore, South India.
36. Electric Construction and Equipment Co. Ltd., 55, Chittaranjan Avenue, Calcutta.
37. "GB" Works Ltd., Mahesh, Rishra P.O., Hooghly, West Bengal State.
- *38. Kirloskar Electric Co. Ltd., 460/2, 18th Cross Road, Malleswaram, Bangalore-3.
39. National Electrical Industries Ltd., The Industrial Estate, Lalbaug, Bombay.
40. Kalsi Engineering Works (Regd.), Ludhiana.
41. India Machinery Co. Ltd., Dasnagar, Howrah, West Bengal.
- †42. Investa Machine Tools & Engineering Co. Ltd., Clerk Road, Pais Street, Bombay-11.
- *43. Praga Tools Corporation Ltd., Saifabad, Hyderabad (Dn.).
44. Masseys' Railway Terminus Road, P.B. No. 60, Royapuram, Madras.
- *45. S.P. Engineering Corporation, 79/7, Larouche Road, Kanpur.
- *46. Central Province Industries Ltd., Kandwa, Madhya Pradesh.
47. Gresham & Craven of India Ltd., 22, Gobra Road, Entally, Calcutta-14.
- †48. Hindustan Foundry Ltd., Udyog Nagar, Bombay-22.
- *49. Jyoti Ltd., Post Chemical Industries, Baroda-3.
- *50. Kirloskar Brothers Ltd., Kirloskarvadi, South Satara District, South India.
51. Kumar Industries, P.O. Edathara, Para Railway Station (South Railway), South Malabar, South India.
52. The Mysore Machinery Manufacturers Ltd., 5th Mile, Mysore Road, Bangalore-2.
53. Omkar Iron & Brass Factory, Char Rasta, Dariapur, Ahmedabad.
54. P.S.G. & Son's Charity Industrial Institute, Peclamedu P.O., Coimbatore, South India.
55. Packo Engineering Ltd., Luxmipuri, Kolhapur.
56. Ruston & Hornby (India) Ltd., 1, Forbes Street, Post Box No. 91, Fort, Bombay.
57. Vijay Foundry, Pappanickenpalayam, Coimbatore, South India.
- *58. Jhonston Pumps (India) Ltd., 2, Fairlie Place, Calcutta-1.
59. Bery Brothers, 135, Canning Street, Calcutta-1.
60. G. G. Dandekar Machine Works Ltd., Bhiwandi, Thana District, Bombay State (Via Kalyan, Central Railway).
61. K. C. Mallick & Sons Ltd., 77/13, Dhuramtalla Street, Calcutta-13.
62. Bombay Steam Navigation Co. Ltd., Dockyard Road, Mazagaon, Bombay.
- †63. H. I. Dixon & Co. Ltd., Love Lane, Cross Lane, Byculia, Bombay.
64. Ganges Engineering Works, Bally, Howrah.
65. Hoogly Docking and Engineering Co. Ltd., 6, Howrah Road, Howrah, West Bengal State.
- *66. Port Engineering Works Ltd., 8, Clive Row, Calcutta-1.
67. Shaparia Dock and Steel Co. Ltd., Sewree Fort Road, Sewree, Bombay.
68. Godrej and Boyce Manufacturing Co. Ltd., Lalbaug Parel, Bombay-12.
- *69. Tata Iron and Steel Co. Ltd., Bombay House, Bruce Street, Fort, Bombay.
- †70. Kumardhubi Engineering Works Ltd., Kumardhubi, West Bengal State.

71. Britannia Engineering Co. Ltd., Tittaghur, 24-Parganas, West Bengal State.
 72. R. M. Engineering Works, Khokhra Mahemdabad, P.O. Bag No. 190, Ahmedabad.
 73. India Machinery Co. Ltd., Makardah Road, Dasnagar, Howrah.
 74. Machinery Manufacturers' Corporation Ltd., Hall & Anderson Building, Park Street, Calcutta-16.
 75. Paragaon Engineering Co., Globe Mills, Bombay-13.
 76. Ravi Industries Ltd., Janmabhoomi Chambers, Fort, Bombay.
 77. Textool Co. Ltd., Post Box No. 221, Coimbatore.
 - *78. Vasant Industrial & Engineering Works, 'Vasant Vijay', 470-71, Worli Road, Bombay-18.
 79. Government Electric Factory, Mysore Road, Bangalore City, South India.
 80. Addison & Co. Ltd., 158, Mount Road, Madras-2.
 81. Ashok Motors Ltd., 13, Haddows Road, Madras-6.
 82. Ashok Leyland Ltd., 38, Mount Road, Madras-2.
 - †83. Automobile Products of India, Ltd., Bhandup, Bombay State.
 84. Dewar's Garage and Engineering Works, 4, Council House Street, Calcutta-1.
 85. Ford Motor Company of India Ltd., P.O. Box No. 499, Bombay.
 - *86. Hindustan Motors Ltd., 8, Royal Exchange Place, Calcutta.
 87. The Peninsular Motor Corporation Ltd., 19, Convent Road, Entally, Calcutta-14.
 88. The Premier Automobiles Ltd., Construction House, Ballard Estate, Bombay.
 89. Sanghani Motor Industries, Agra Road, Bhandup, Bombay State.
 - *90. Simpson & Co. Ltd., 202/203, Mount Road, Madras.
 91. Standard Motor Products of India Ltd., 29, Mount Road, Madras.
 92. Triangular Motors Ltd., New Queen's Road, Bombay.
 - *93. Bombay State Road Transport Corporation, Ghod Bunder Road, Santa Cruz, Bombay-23.
 - *94. B.E.S.T. Undertakings, Electric House, Bombay.
 95. Chief Mechanical Engineer, State Transport Central Office, Government of Bombay, 80/81, Annie Besant Road, Worli, Bombay.
 96. Shri N. Balakrishnan, Bus Superintendent, B.E.S.T. Workshop, Kingsway, Dadar, Bombay.
 97. Air India Ltd., New India Assurance Building, Mahatma Gandhi Road, Bombay.
 - *98. Hindustan Aircraft Ltd., Bangalore.
 - *99. Air India International, Santa Cruz, Bombay-29.
 100. The Secretary, Railway Board, New Delhi.
 101. Controller of Stores, Assam Railway, 3, Koilaghat Street, Calcutta.
 102. Controller of Stores, Eastern Railway, Calcutta.
 103. Controller of Stores, Bikaner State Railway, Bikaner.
 104. Controller of Stores, Central Railway, Bombay V.T.
 105. Controller of Stores, E.I. Railway, Calcutta.
 - *106. Controller of Stores, Northern Railway, The Mall, Delhi.
 - *107. Controller of Stores, Southern Railway, Perambur, Madras.
 - *108. Controller of Stores, Western Railway, Mahalaxmi, Bombay.
 109. Chittaranjan Locomotive Works, Chittaranjan, West Bengal State.
 110. Scindia Steam Navigation Co. Ltd., Scindia House, Ballard Estate, Bombay.
 - *111. Bombay Port Trust, Ballard Estate, Bombay.
 - *112. Calcutta Fan Works Ltd., 19-B, Chowringhee Road, Calcutta-13.
 - *113. Lever Brothers (India) Ltd., P.O. Box 409, Bombay-1.
- III. (ii) ASSOCIATIONS (CONSUMERS) :
- *1. The Secretary, Fan Makers' Association of India, 35, Stephen House, 4, Dalhousie Square East, Calcutta.
 - *2. The Secretary, Indian Electrical Manufacturers' Association, Indian Exchange, Calcutta.

3. Society of Motor Manufacturers & Traders Ltd., Post Box No. 173, New Delhi.
- *4. The Secretary, Engineering Association of India, 23-B, Netaji Subhas Road, Calcutta-1.
- *5. Delhi Motor Traders' Association, P.O. Box No. 1098, Kashmere Gate, Delhi-1.
6. Bharat Chamber of Commerce, Imperial Bank Building, Calcutta-7.

IV. RAW MATERIAL MANUFACTURERS :

- *1. Bhartia Electric Steel Co. Ltd., 42, Shibtolia Street, Calcutta.
- *2. Mukand Iron & Steel Works Ltd., 51, Mahatma Gandhi Road, Bombay.
- *3. Metal & Steel Factory, Ishapore, Calcutta.

V. GOVERNMENT DEPARTMENTS :

- *1. The Chief Industrial Adviser, Ministry of Commerce and Industry (Development Wing), Shahjahan Road, New Delhi.
2. Director General of Supplies and Disposals, Shahjahan Road, New Delhi.
- *3. Indian Standards Institution, 19, University Road, Civil Lines, Delhi-8.
- *4. The Chief Secretary to the Government of Rajasthan, Jaipur.
- *5. First Secretary (Commercial) to the Embassy of India, in Japan, Empire House, Marunochi, Tokyo.
- *6. The Collector of Customs, Bombay.
- *7. The Collector of Customs, Calcutta.
- *8. The Collector of Customs, Madras.



APPENDIX II

(Vide Paragraph 4.4)

List of persons who attended the Commission's public inquiry on 21st and 22nd February, 1956.

Producers :

Representing

- | | | |
|-------------------------------|---|---|
| 1. Shri R. D. Periwal . . . | } | National Bearing Co., Ltd., Jaipur, Rajasthan |
| 2. Mr. C. W. Golding . . . | | |
| 3. Shri P. D. Bhaiya . . . | | |
| 4. Shri S. G. Choudhary . . . | | |
| 5. Shri P. R. Dubey . . . | | |
| 6. Shri S. R. Bhise . . . | | |
| 7. Shri B. K. Maheswari . . . | | |
| 8. Shri J. D. Thirani . . . | | |
| 9. Shri V. P. Aeron . . . | | |

Producers' Association :

- | | |
|--------------------------------|---|
| 10. Shri R. D. Vidyarthi . . . | Engineering Association of India, 23-B, Netaji Subhas Road, Calcutta-1. |
|--------------------------------|---|

Importers :

- | | |
|--------------------------------|---|
| 11. Shri D. S. Gandhi . . . | Dhirajlal & Co., 62, Princess Street, Bombay-2. |
| 12. Mr. J. Higham . . . | } The S. K. F. Ball Bearing Company, Ltd., Mustafa Building, 19, Sir P.M. Road, Fort, Bombay-1. |
| 13. Mr. S. Virding . . . | |
| 14. Mr. R. C. Atterton . . . | Roberts, McLean & Co., Ltd., 31, Netaji Subhas Road, Calcutta. |
| 15. Shri R. L. Maheswari . . . | The Central Trading Co., 137, Canning Street, Calcutta-1 and Ball Bearings Dealers' Association, 137, Canning Street, Calcutta-1. |
| 16. Mr. J. H. Langdon . . . | } Greaves Cotton Co. Ltd., 1, Forbes Street, Fort, Bombay. |
| 17. Shri L. S. Soman . . . | |
| 18. Shri M. B. Bhaskare . . . | |
| 19. Shri B. S. Bhatt . . . | William Jacks & Co., Ltd., 16, Netaji Subhas Road, P.O. Box 369, Calcutta-1. |
| 20. Shri G. Mirchandani . . . | Turner, Hoare & Co. Ltd., Gateway Building, Appolo Bunder, Bombay-1. |

Importers' Association :

- | | |
|-----------------------------|--|
| 21. Shri R. D. Shah . . . | } The Mill Gin Stores Merchants' Association, 109—111, Nagdevi Street, Bombay-3. |
| 22. Shri M. K. Joshi . . . | |
| 23. Shri K. J. Shah . . . | |
| 24. Shri B. L. Biyani . . . | |

Dealers :

25. Shri D. D. Shah . . . Associated India Agencies, India Exchange Building, Royal Exchange Place Extension, Calcutta-1.
26. Shri R. T. Shah . . . The Motor Trade Supply Co., Bombay.
27. Shri B. H. Mehta . . . Anil Bearing Stores, Bombay.
28. Shri C. G. Shah . . . Bharat Trading Co., 43, Nagdevi Cross Lane, Bombay-3.
29. Shri K. Srinivasan . . . B. Chowdhury & Co., Indian Globe Chambers, Fort Street, Bombay.

Consumers :

30. Shri S. G. Shivashanker . . . Hindustan Aircraft Ltd., Bangalore.
31. Shri R. C. Mirchandani . . . Motor & Machinery Manufacturer's Ltd., Calcutta.
32. Shri S. P. Divgi . . . Associated Electrical Industries Manufacturing Ltd., Crown House, 6, Mission Row, Calcutta-1.
33. Shri A. P. Bhatt . . . Jyoti Ltd., P.O. Chemical Industries, Baroda-3.
34. Shri S. C. Kale . . . Air India International, Santa Cruz, Bombay-29.
35. Shri P. S. Jejurkar . . . Hind Cycles, 250, Worli, Bombay-18.
36. Shri R. K. Tandon . . . Central Railway, V.T., Bombay.

Consumers' Association :

37. Shri P. R. Deshpande . . . Fan Makers' Association of India, 35, Stephen House, 4, Dalhousie Square East, Calcutta, and Crompton Parkinson (Works) Ltd., Haines Road, Worli, Bombay-18, and Indian Electrical Manufacturers' Association.
38. Shri D. K. Sinha . . . Indian Electrical Manufacturers' Association, Indian Exchange, Calcutta.

Government Departments :

39. Shri S. C. Banerjee . . . Development Wing of the Ministry of Commerce and Industry, Shahjahan Road, New Delhi.
40. Lt. Col. J. V. P. Braganza . . . Ministry of Defence, New Delhi.
41. Shri R. T. Ramachandra . . . } Director General of Supplies and Disposals, Shah-
42. Shri P. R. Parkar . . . } jahan Road, New Delhi.
43. Shri J. B. Treasurywalla . . . Collector of Customs, Bombay.

APPENDIX III

(Vide Paragraph 8.5)

Statement showing actual production of each type/size of ball bearings for the years 1952, 1953, 1954 and 1955 and the estimated production for the year 1956

Haffmann Licence	Actual Production during				Estimate for 1956
	1952	1953	1954	1955	
I	2	3	4	5	6
<i>I. Ball Bearings :</i>					
110	88,365	100,768	49,287	65,123	100,000
112	30,756	44,852	34,140	51,181	92,000
115	5,472	6,016	25,126	8,992	24,000
19E-10094	..	234	366	85	..
117	56,070	126,660	197,601	237,479	240,000
B-10094	..	644	2,352	324	..
120	101,590	181,797	120,808	209,398	200,000
125	13,717	29,506	38,514	20,185	10,000
125K	..	2,404	672	6	..
19-7065	..	1,405	277	..	..
130	19,069	34,804	25,064	2,136	..
EOA-7065	..	71	92	50	..
130K	..	229	23	1	..
135	1,449	1,186	3,971	5,258	..
135K	177	739	724	22	..
135KP	..	..	..	36	..
8-A-7025	..	42	92	62	..
OIT-4812	..	389	1,000	752	..
EOA-7025	..	14	187	67	..
101608	..	..	195	3,306	..
140K	..	173	318	313	..
140W	..	..	..	481	..
140	..	3,340	1,433	4,325	4,000
51A-7025	..	181	246	201	..
EOA-1225	..	54	98	130	..
145K	137	25	189	425	..
145KP	..	..	..	22	..
160	..	..	..	..	500
BB-7025	..	915	384	251	..
145	802	881	162	399	1,000
150	..	..	470	1,288	1,000
150K	..	..	..	61	..
X20	..	..	25,965	3,635	..
X25	..	..	11,492	521	..

1	2	3	4	5	6
X30	..	..	14,299	1,058	..
310	..	..	..	2,678	8,000
312	6,076	2,718	412	126	..
22334(312)	..	..	355	4,276	..
315	3,778	2,099	..	3,626	..
317	..	2,167	4,008	487	..
320	7,020	..	7,196	4,091	10,000
130127(320)	..	..	310	2,668	..
325	9,013	11,351	19,025	14,335	10,000
325K	..	..	179	328	..
330	4,958	8,174	12,610	8,371	10,000
330K	..	..	194	6	..
51-A-7065(330K)	..	..	..	198	..
130640(330)	..	..	188	4,892	..
335	..	1,318	5,784	1,653	2,000
335K	..	..	280	379	..
BB-7065(335)	..	..	..	516	..
340	..	..	1,693	1,409	4,000
340K	..	..	35	272	..
8MTH-7025(340K)	..	..	..	244	..
345	..	..	2,582	506	2,000
345K	..	..	..	103	..
350	..	925	..	656	1,000
S 3	..	..	..	3,790	12,000
S 7	7,731	8,328	454	624	12,000
S 8	21,106	11,617	13,275	1	..
S 9	18,945	20,153	4,830	661	..
540	..	..	..	286	..
540K	..	..	..	356	..
LS 5	..	1,314	3,298	16,884	12,000
LS 7	1,982	2,362	2,615	9,889	..
LS 8	4,664	2,998	8,267	11,842	16,000
LS 9	559	4,131	6,358	5,850	..
LS 10	1,788	..	6,022	8,276	12,000
LS 11	2,330	..	2,142	4,129	8,000
LS 11K	2	..	283	78	..
N4427(LS11K)	177	..	565	1	2,000
22982(LS11K)	..	..	..	3,688	..
LS 12	594	5,062	1,842	1,580	2,000
LS12K	..	..	553	16	..
17181(LS12K)	..	..	..	2,259	..
LS 12½	371	494	1,414	209	..
LS 13	..	..	1,515	814	2,000
LS 13½	..	1,649	1,095	..	..
LS 14	..	..	80	530	..
LS14½	..	..	542	19	..
LS 15	..	650	451	447	..

1	2	3	4	5	6
MS 7	2,698	..	..
MS 8	3,413	2,092	8,000
MS 9	1,983	4,517	182	4,393	10,000
MS 10	..	5,523	3,611	7,926	10,000
MS 11	..	1,433	4,814	3,257	2,000
MS 12	276	926	1,004	3,510	..
101547(MS 12)	110	4,775	..
MS 12K	522	..
MS 12½	1,605	482	2,000
MS 13	324	517	1,000
MS 13½	..	866	716	455	2,000
MS 14	441	467	1,000
MS 14½	8	445	598	1,291	..
MS 15	..	187	743	1,230	..
EW 5/8	580	13	192	..	..
EW 3/4	30	..	998	619	2,000
EW 7/8	601	..	672	..	..
EW 1	7	..	..	..	..
EW 1-1/8	2,488	258	..	..	..
W 1/2	..	318	196	..	..
W 5/8	..	29	700	276	..
W 3/4	..	2,920	..	..	..
W 1-1/4	594	500
W 1-1/2	..	156	..	444	500
W 2-1/2	52	1,037	1,000
W 3	500
LM 30	1,476	500
MW 1½	423	..
U 110	472	1,152	..
U 130	..	11	..	..	..
U 140	..	27	629	1,932	500
U 145	32	16	..
U 155	23	27	..
U 175	10	17	..
U 185	30	..
U 325	191	..
ULS 8	712	682	..
ULS 9	329	..	..
ULS 10	539	626	..
ULS 11	1,274	500

1	2	3	4	5	6
ULS 12	245	1,129	500
ULS 13	159	321	500
ULS 13½	434	500
117 ACD	..	20	4	816	..
120 ACD	61	..	..	..	..
160 ACD	319	500
350 ACD	31	258	..
545 ACD	25	185	400
N 1025	3,065	11,372	16,000
N4098(130)
HM 1(S7)	..	628	2,868	559	..
W-1	2,000
S-10	6,000
LS-16	500
U-330	500
UMS-13	500
U-340	500
340 ACD	500
MS 16	500
MS 17 ACD	400
TOTAL	414,742	643,136	698,211	798,748	869,300

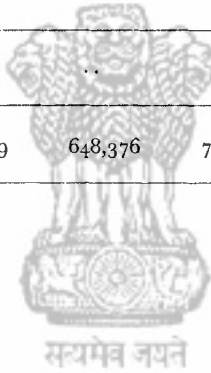
II. Adapter Bearings :

UT 130 E	..	..	..	..	2,000
UT 140 E	698	2,688	2,814	2,620	10,000
UT 145 E	59	1,057	3,776	1,907	10,000
UT 155 E	293	1,488	77	863	4,000
UT 175 E	18	..	123	..	2,000
UT 185 E	959	7	..	..	1,000
TOTAL	2,027	5,240	6,790	5,390	29,000

III. Roller Bearings :

R 325	..	..	204	..	..
R 330	..	..	..	278	500
R 335	..	..	269	85	500
R 340	..	..	4	242	500
R 135	..	..	679	12	2,000
R 135 L	..	..	393	6	..
R 140	..	..	..	313	..

1	2	3	4	5	6
RLS 10	2,000
RLS 11	158	329	2,000
RLS 12	271	1,677	3,000
RLS 13	281	699	1,000
RLS 13½	87	522	1,000
RLS 14	4	207	500
RLS 14½	94	..	..
RLS 15	261	..	500
RMS 11	281	269	1,000
RMS 12	104	74	1,000
RMS 12½	4	192	500
RMS 13	317	..
RMS 13½	1,000
RMS 14	427	..
RMS 14½	60	7	500
RMS 15	65	556	500
TOTAL	3,219	6,212	18,500
GRAND TOTAL	416,769	648,376	708,220	810,350	916,800



APPENDIX IV

(Vide Paragraph 10.2)

Statement showing the import control policy in respect of Ball Bearings for the different licensing periods from January-June, 1952 to January-June, 1956.

Part and Serial No. of I.T.C. Schedule	Description	Quota percentage
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January—June, 1952

Part II—

19(i) Ball bearings of 1" and less than 1" in bore (internal) diameter. 30%(D)

Ball bearings exceeding 1" in bore (internal) diameter . . . O. G. L. No. XXIII.

I. T. C. Notification No. 31-ITC(FN)/52, dated 22nd March 1952 has also allowed import of the following :—
"Ball bearings of 1" and less than 1" in bore (internal) diameter other than the listed sizes above and magneto type bearings—Soft currency licences will be granted on the basis of a quota of 70 per cent. of half of best year's imports of ball bearings of 1" and less than 1" in bore (internal)."

Part and Serial No. of I.T.C. Schedule	Description	Policy for Established importers	Period of validity
1	2	3	4

July—December, 1952

Part II—

19 (1) Ball Bearings—

(a) Ball bearings of 2" and less than 2" in bore (internal) diameter :

- | | | |
|---|--------------|-------------|
| (i) Ball bearings of 1" in bore diameter specified in Annexure "B". | 10% | Six months. |
| (ii) Ball bearings of 1" in bore diameter and below other than those specified in Annexure "B". | 100% | Do. |
| (iii) Ball bearings above 1" in bore diameter and up to and including 2" in bore diameter as specified in Annexure "C". | 6½% | Do. |
| (iv) Ball bearings above 1" and up to and including 2" in bore diameter other than those specified in Annexure "C". | 100% | Do. |
| (v) Ball bearings above 2" in bore diameter. | O.G.L. Soft. | |

1	2	3	4
January—June, 1953			
Part II—			
19 (1)	Ball Bearings—		
(a) (i)	Ball bearings of 1" in bore diameter and below as specified in Annexure "B".	5%	Six months.
(ii)	Ball bearings of 1" in bore diameter and below other than those specified in Annexure "B".	50%	Do.
(iii)	Ball bearings above 1" in bore diameter and up to and including 2" in bore diameter as specified in Annexure "C".	6½%	Do.
(iv)	Ball bearings above 1" in bore diameter and up to and including 2" in bore diameter other than those specified in Annexure "C".	5%	Do.
(v)	Ball bearings above 2" in bore diameter	20% Gen. 100% Soft.	Do.
July—December, 1953			
Part II—			
19 (1)	Ball Bearings—		
(a) (i)	Ball bearings of 1" in bore diameter and below as specified in Appendix C(1).	10%M	Six months.
(ii)	Ball bearings of 1" in bore diameter and below other than those specified in Appendix 3(1).	100%M	Do.
(iii)	Ball bearings above 1" in bore diameter and up to and including 2" in bore diameter as specified in Appendix C(2).	10%	Do.
(vi)	Ball bearings above 1" and up to and including 2" in bore diameter other than those specified in Appendix C(2).	100%M	Do.
(v)	Ball bearings above 2" in bore diameter	Gen. 20%M. Soft 100%M	Do.
Part IV—			
293, 295, 297	Motor vehicle parts :	Not more than one per cent. of the face value of licences for motor vehicle parts can be utilised for the import of ball bearings not specified in Appendix C of the Red Book.	
Part V—			
74	Tractors and parts thereof.	Licences for such parts will not be valid for import of ball bearings.	
Part II—			
36(5)	Parts of earth moving machinery	Not more than one per cent. of the face value of licences granted for S. No. 36(5) of Part II can be utilised for the import of ball bearings not specified in Appendix "C" of the Red Book.	

1	2	3	4
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January--June, 1954.

Part II--

19(1) (a) Ball Bearings --

(i)	Ball bearings of 1" in bore diameter and below as specified in Appendix C(1).	10% M	Six Months.
(ii)	Ball bearings of 1" in bore diameter and below other than those specified in Appendix C(1).	75% M	Do.
(iii)	Ball bearings above 1" and up to and including 2" in bore diameter as specified in Appendix C(2).	10%	Do.
(iv)	Ball bearings above 1" and up to and including 2" in bore diameter other than those specified in Appendix C (2).	75% M	Do.
(v)	Ball bearings above 2" in bore diameter as specified in Appendix C(3).	10%	Do.
(vi)	Ball bearings above 2" in bore diameter other than those specified in Appendix C (3).	100% M	Do.

Part IV--

293, 295 and
297.

Motor vehicle parts

Up to 1 per cent. of the face value of the licence for motor vehicle parts granted on the basis indicated can be utilised for the import of ball bearings not specified in Appendix "C" of the Red Book.

Part II--

36(5)	Component parts for Earth moving machinery	Not more than 2 per cent. of the face value of licences granted for S. No. 36(5) can be utilised for the import of ball bearings not specified in Appendix "C".
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Part V --

74(vi)	Parts of power driven machinery	Licences for such parts will not be valid for the import of ball bearings, etc.
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July--December, 1954 and January--June, 1955.

Part II--

19(1) (a) Ball Bearings --

(i)	Ball bearings of 1" in bore diameter and below as specified in Appendix XIV (1).	5%	Six months.
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1	2	3	4
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July—December, 1954 and January—June, 1955—contd.

Part II—contd.

(ii)	Ball bearings of 1" in bore diameter and below other than those specified in Appendix XIV (1).	33 1/3%	Six months.
(iii)	Ball bearings above 1" and up to and including 2" in bore diameter as specified in Appendix XIV (2).	5%	Do.
(iv)	Ball bearings above 1" and up to and including 2" in bore diameter other than those specified in Appendix XIV (2).	20%	Do.
(v)	Ball bearings above 2" in bore diameter as specified in Appendix XIV (3).	5%	Do.
(vi)	Ball bearings above 2" in bore diameter other than those specified in Appendix XIV (3).	33 1/3%	Do.

Part IV—

293, 295 and 297.	Automobile parts	Up to 75 per cent. of the face value of the licences for Motor vehicle parts granted on the basis indicated in Red Book can be utilised for the import of ball bearings not specified in Appendix XIV of Red Book.
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Part V—

74 (iii)	Spare parts for agricultural tractors and for tractor drawn agricultural implements.	Not more than 2 per cent. of the face value of quota licence issued can be utilised for the import of Ball Bearings not specified in Appendix XIV of Red Book.
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Part II—

36(5)	Earth moving machinery	Not more than 2 per cent. of the face value of licence granted for 36(5) of Part II can be utilised for the import of ball bearings not specified in Appendix XIV of Red Book.
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July—December, 1955 and January—June, 1956

Part II—

19(1)	(a) Ball Bearings—		
	(i) Ball bearings of 1" in bore (internal) diameter and below as specified in Appendix XIV (1).	5%	Twelve months.
	(ii) Ball bearings of 1" in bore (internal) diameter and below other than those specified in Appendix XIV (1).	33 1/3%	Do.
	(iii) Ball bearings above 1" and up to and including 2" in bore (internal) diameter as specified in Appendix XIV (2).	5%	Do.

1	2	3	4
<i>July—December 1955 and January—June 1956—contd.</i>			
Part II— <i>contd.</i>			
(iv)	Ball bearings above 1" and up to and including 2" in bore (internal) diameter other than those specified in Appendix XIV (2).	20%	Twelve months.
(v)	Ball bearings above 2" and up to and including 3" in bore (internal) diameter as specified in Appendix XIV (3).	5%	Do.
(vi)	Ball bearings above 2" and up to and including 3" in bore (internal) diameter other than those specified in Appendix XIV (3).	33 1/3%	Do.
(vii)	Ball bearings above 3" in bore (internal) diameter.	100%	Do.



APPENDIX V

(Vide paragraph 10.2)

Statement showing types of ball bearings, the imports of which were restricted during the period January—June, 1956

Hffmann licence No.	SKF No.	R&M No.	FBC No.	Bearing Dimensions		
				Bore	Outside Diameter	Width

(A) Ball Bearing 1" in bore (internal) diameter and below

Light Series—Deep Groove Single Row Radial Ball Bearings—Metric Size

110	6200	LJ 10	6200	10 mm	30 mm	9 mm
112	6201	LJ 12	6201	12 mm	32 mm	10 mm
115	6202	LJ 15	6202	15 mm	35 mm	11 mm
117	6203	LJ 17	6203	17 mm	40 mm	12 mm
120	6204	LJ 20	6204	20 mm	47 mm	14 mm
125	6205	LJ 25	6205	25 mm	52 mm	15 mm
125K	With special	features		25 mm	52 mm	15 mm

Medium Series—Deep Groove Single Row Radial Ball Bearings—Metric Size

312	6301	MJ 12	6301	12 mm	37 mm	12 mm
315	6302	MJ 15	6302	15 mm	42 mm	13 mm
317	6303	MJ 17	6303	17 mm	47 mm	14 mm
320	6304	MJ 20	6304	20 mm	52 mm	15 mm
325	6305	MJ 25	6305	25 mm	62 mm	17 mm
325K	With special	features		25 mm	62 mm	17 mm

Light Series—Deep Groove Single Row Radial Ball Bearings—Inch Size

LS 5	RLS 4	LJ 1/2	LS 5	1/2	1-5/16	3/8
LS 7	RLS 5	LJ 5/8	LS 7	5/8	1-9/16	7/16
LS 8	RLS 6	LJ 3/4	LS 8	3/4	1-7/8	9/16
LS 9	RLS 7	LJ 7/8	LS 9	7/8	2	9/10
LS10	RLS 8	LJ 1	LS10	1	2-1/4	5/8

Medium Series—Deep Groove Single Row Radial Ball Bearings—Inch Size

MS 7	RMS 5	MJ 5/8	MS 7	5/8	1-13/16	5/8
MS 8	RMS 6	MJ 3/4	MS 8	3/4	2	11/16
MS 9	RMS 7	MJ 7/8	MS 9	7/8	2-1/4	11/16
MS10	RMS 8	MJ 1	MS 10	1	2-1/2	3/4

Narrow Series—Deep Groove Single Row Radial Ball Bearings—Inch Size

S 7	EE 5	KLNJ 5/8	EE 5	5/8	1-3/8	9/32
S 8	EE 6	KLNJ 3/4	EE 6	3/4	1-5/8	5/16
S 9	EE 8	KLNJ 7/8	EE 8	7/8	1-7/8	3/8

Hoffmann Licence No.	SKF No.	R & M No.	FBC No.	Bearing Dimensions		
				Bore	Outside Diameter	Width
<i>Extra Light Series</i> —Single Thrust Bearings—Inch Size						
EW 5/8	B 5/8	FT 5/8	EW 5/8	5/8	1-3/32	9/32
EW 3/4	B 6	FT 3/4	EW 3/4	3/4	1-5/16	9/32
EW 7/8	B 7	FT 7/8	EW 7/8	7/8	1-1/2	3/8
EW 1	B 8	FT 1	EW 1	1	1-5/8	3/8

Light Series—Single Thrust Bearings—Inch Size

W 3/4	06	LT 3/4	..	3/4	1-17/32	5/8
W 1/2	04	LT 1/2	W 1/2	1/2	1-9/32	5/8
W 5/8	05	LT 5/8	W 5/8	5/8	1-13/32	5/8

Light Series—Combined Radial and one Direction Thrust Bearings—Metric Size

117 AC	7203	1JTF 17	7203	17 mm	40 mm	12 mm
120 AC	7204	1JTF 20	7204	20 mm	47 mm	14 mm

Light Series—Double Row Self Aligning Journal Bearings—Metric Size

U 110	1200	NIJ 10	P 200	10 mm	30 mm	9 mm
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Light Series—Double Row Self Aligning Journal Bearings—Inch Size

ULS 6	RL 6	NIJ 3/4	RL 6	3/4	1 7/8	9/16
ULS 9	RL 7	NIJ 7/8	RL 7	7/8	2	9/16
ULS10	RL 8	NIJ 1	RL 8	1	2 1/4	5/8

Special Bearings (Metric)

N 1025	EL 9	9 mm	24 mm	7 mm
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Light Series—Deep Groove Single Row Rigid Ball Bearings—Inch Size

S 3	EE 3	KLNJ 3/8	EE 3	3/8	7/8	7/32
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Medium Series—Self Aligning Double Row Ball Journal Bearings—Metric Size

U 325	1305	NMJ 25	P 305	25	62	17 mm
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Medium Series—Rigid Ball Journal Single Row Bearings—Metric Size

310	6300	MJ 10	..	10	35	11 mm
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Hoffmann Licence No.	SKF No.	R & M No.	FBC No.	Bearing Dimensions		
				Bore	Outside diameter	Width

(B) Ball Bearing above 1" in bore (Internal) Diameter and upto and including 2" in bore (Internal) Diameter

Light Series—Deep Groove Single Row Radial Single Ball Bearings—Metric Size

130	6206	LJ 30	6206	30 mm	62 mm	16 mm
130K	With special features.			30 mm	62 mm	16 mm
135	6207	LJ 35	6207	35 mm	72 mm	17 mm
135K	With special features.			35 mm	72 mm	17 mm
140	6208	LJ 40	6208	40 mm	80 mm	18 mm
140K	With special features.			40 mm	80 mm	18 mm
145	6209	LJ 45	6209	45 mm	85 mm	19 mm
145K	With special features.			45 mm	85 mm	19 mm

Medium Series—Deep Groove Row Radial Ball Bearings—Metric Size

330	6306	MJ 30	6306	30 mm	72 mm	19 mm
330K	With special features.			35 mm	72 mm	19 mm
335	6307	MJ 35	6307	35 mm	80 mm	21 mm
335K	With special features.			35 mm	80 mm	21 mm
340	6308	MJ 40	6308	40 mm	90 mm	23 mm
340K	With special features.			40 mm	90 mm	23 mm
345	6309	MJ 45	6309	45 mm	100 mm	25 mm
350	6310	MJ 50	6310	50 mm	110 mm	27 mm

Light Series—Single Row Ball Journal Rigid Bearings—Inch Size

LS 11	RLS 9	LJ 1-1/8	LS 11	1-1/8	2-1/2	5/8
LS 11	With special features.			1-1/8	2-1/2	5/8
LS 12	RLS 10	LJ 1-1/4	LS 12	1-1/4	2-3/4	11/16
LS K	With special features.			1-1/4	2-3/4	11/16
LS 12	RLS 11	LJ 1-3/8	LS 12½	1-3/8	3	11/16
LS 13-1/2	RLS 13	LJ 1-5/8	LS 13½	1-5/8	3-1/2	3/4
LS 15	RLS 16	LJ 2	LS 15	2	4	13/16

Medium Series—Single Row Ball Journal Rigid Bearings—Inch Size

MS 11	RMS 9	MJ 1-1/8	MS 11	1-1/8	2-13/16	13/16
MS 12	RMS 10	MJ 1-1/4	MS 12	1-1/4	3-1/8	7/8
MS 14½	RMS 15	MJ 1-7/8	MS 14½	1-7/8	4-1/2	1-1/16
MS 15	RMS 16	MJ 2	MS 15	2	4-1/2	1-1/16
MS 12½	RMS 11	MJ 1-3/8	MS 12½	1-3/8	3-1/2	7/8
MS 13½	RMS 13	MJ 1-5/8	MS 13½	1-5/8	4	15/16

Hoffmann Licence No.	SKF No.	R&M No.	FBC No.	Bearing	Dimensions	
				Bore	Outside Diameter	Width

Light Series—Double Row Self Aligning Journal Bearings—Metric Size

U 130	1206	NLJ 30	P 206	30 mm	62 mm	16 mm
U 140	1208	NLJ 40	P 207	40 mm	80 mm	18 mm

Light Series—Single Thrust Bearings—Inch Size

W 1-1/2	612	LT 1-1/2	..	1-1/2	2-11/32	23/32
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Extra light Series—Single Thrust Bearings—Inch Size

EW 1-1/8	B 9	FT 1-1/8	1-1/8	1-3/4		3/8
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Light Series—Double Row Self Aligning Adapter Bearings—Metric and Inch Size

UT 140E	1508E	ANLM 1 1/2	P507	1 1/2	80 mm	18 mm
UT 145E	1509E	ANLM 1 1/2	P508	1 1/2	85 mm	19 mm
UT 155E	1511E	ANLM 2	P510	2	100 mm	21 mm

Light Series—Double Row Self Aligning Adapter Bearings—Metric Size

UT 140	1508	ANLM 35	..	35 mm	80 mm	18 mm
UT 145	1509	ANLM 40	..	40 mm	85 mm	19 mm
UT 155	1511	ANLM 50	..	50 mm	100 mm	21 mm

Light Series—Deep Groove Single Row Radial Ball Bearings—Inch Size

LS 13	RLS 12	LJ 1 1/2	LS 13	1 1/2"	3-1/4"	3/4"
LS 14	RLS 14	LJ 1-3/4	LS 14	1-3/4"	3-3/4"	13/16"
LS 14 1/2	RLS 15	LJ 1-7/8	LS 14 1/2	1-7/8"	4"	13/16"

Medium Series—Deep Groove Single Row Radial Ball Bearings—Inch Size

MS-12K	RMS10NER	MJ 1-1/4	GMS 12SG	1-1/4	3-1/8	7/8
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(with groove
on outer
race).

MS 13	RMS 12	MJ 1-1/2	MS 13	1 1/2	3-3/4	15/16
MS 14	RMS 14	MJ 1-3/4	MS 14	1-3/4	4-1/4	1-1/16

Light Series—Self Aligning Double Row Journal Bearings—Inch Size

ULS 12	RL 10	NLJ 1 1/4	RL 10	1-1/4	2-3/4	11/16
ULS 13	RL 12	NLJ 1 1/2	RL 12	1 1/2	3-1/4	3/4
ULS 13 1/2	RL 13	NLJ 15/8	RL 13	1-5/8	3 1/2	3/4

Light Series—Deep Groove Single Row Radial Ball Bearings—Metric Size

150	6210	LJ 50	6210	50 mm	90 mm	20 mm
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Light Series—Single Thrust Bearings—Metric Size

LM 30	51206	LT 30	51206	30 mm	53 mm	16 mm
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Hoffmann Licence No.	SKF No.	R & M No.	FBC No.	Bearing Dimensions		
				Bore	Outside Diameter	Width

Medium Series—Single Row Angular Contact Ball Bearings—Metric Size

350ACD	7310	MJT	50	..	50 mm	110 mm	27 mm
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Light Series—Double Self Aligning Ball Bearings—Metric Size

U145	1209	MLJ	45	P 209	45 mm	85 mm	19 mm
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Heavy Series—Single Row Angular Contact Ball Bearings—Metric Size

545 ACD	7409	HJT	45	..	45 mm	120 mm	29 mm
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Heavy Series—Deep Groove Single Row Radial Ball Bearings—Metric Size

540	6408	HJ	40	6408	40	110	27 mm
540 (with groove on outer race).	6408 NR	HJ	40G	6408SG	40	110	27 mm

Medium Series—Single Thrust Bearing with Flat Seating—Inch Size

MW 1½ T	12 MT 1½	T 12	..	1½"	2.7/8"	1.1/16"
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Light Series—Deep Groove Ball Journal Single Row Bearing—Metric Size

140 W (Extended inner)					40	80	18 mm
135 KP (Groove on outer and one side dust shield)					35	72	17 mm

(C) Ball Bearing above 2" Bore (Internal) Diameter and Up to and Including 3"

Light Series—Single Thrust Bearing in Inches and m.m. Sizes

W 2½	020	LT 2½	W 2½	2½"	3.23/32"	1"
W 3	024	LT 3	W 3	3"	4.3/8"	1.1/8"
WSP 3	..	SLT 3	..	3"	4.3/8"	1.1/8"
WZ 3	..	SLTW/S3	..	3"	4.3/8"	1.5/16"

Light Series—Double Row Self Aligning Ball Journal Bearings

U 155	1211	NLJ	55	P 211	55 mm	100 mm	24 mm
U 155 W	1211	NLDJ	55	P 3211	55 mm	100 mm	25 mm
U 175	1215	NLJ	75	P 215	75 mm	130 mm	25 mm
U 175 W	1215	NLDJ	75	P 3215	75 mm	130 mm	31 mm
U 185	1217	NLJ	85	P 217	85 mm	150 mm	28 mm

Light Series—Double Row Self Aligning Adapter Bearings in Inch and mm. Sizes

UT 175 E	1515 E	ANLM 2½	P 513	2½"	130 mm	25 mm
UT 175	1515	ANLM 65	..	65 mm	130 mm	25 mm
UT 185 E	1517 E	ANLM 3	P 515	3"	150 mm	28 mm
UT 185	1517	ANLM 75	..	75 mm	180 mm	41 mm

N. B.—(i) The dimensions shown against Adapter type of Ball Bearings of UT series are the internal bore of the sleeves fitted to the bearing and not the internal bore of the bearings without the sleeves. As such, Adapter type of Ball Bearings of UT series of sizes can only be imported within the restricted quota irrespective of the fact whether they are imported with or without the sleeves.

(ii) In addition to the four makes given in the appendices *viz.* Hoffmann, SKF R&M and FBC, ball bearings of other makes falling within the specific sizes mentioned in the appendices will also be treated as "restricted types" and will be licensed within the restricted quota.

APPENDIX VI

[Vide paragraphs 12, 14.1 & 14.2]
Statement showing comparison of lowest c. i. f. prices and landed costs ex-duty with the fair ex-works prices estimated for the production of bearings for 1956.

(Price per bearing)									
Serial No.	Bearing No.	C.i.f. price	Clearing charges			Landed cost ex-duty of the imported bearing	Fair ex-works price of the indigenous bearing	Estimated production for 1956	Difference between fair ex-works price and landed cost ex-duty as a percentage of c.i.f.
			Rs.	Rs.	Rs.				
1	2	3	4	5	6	7	8		
<i>Ball Bearings</i>									
<i>(A) Up to 1" bore</i>									
1	110	1.063	0.016	1.079	2.356	100,000	120.13		
2	112	1.078	0.016	1.094	2.492	92,000	129.68		
3	115	1.188	0.018	1.206	2.657	24,000	122.14		
4	117	1.297	0.019	1.316	2.836	240,000	117.19		
5	120	1.563	0.023	1.586	3.438	200,000	118.49		
6	125	1.875	0.028	1.903	4.093	10,000	116.80		
7	310	1.281	0.019	1.300	2.508	8,000	100.55		
8	320	1.875	0.028	1.903	4.110	10,000	117.71		
9	326	2.313	0.035	2.348	5.277	10,000	126.63		
10	LS8	2.250	0.034	2.284	3.583	16,000	57.73		
11	LS10	2.891	0.043	2.934	4.913	12,000	68.45		

1	2	3	4	5	6	7	8
		Rs.	Rs.	Rs.	Rs.	Nos.	Percentage
12	S3	1.391	0.021	1.412	2.438	12,000	73.76
13	MS8	2.734	0.041	2.775	4.467	8,000	61.89
14	MS10	3.844	0.058	3.902	6.066	10,000	56.30
15	N1025	1.078	0.016	1.094	27.160	16,000	98.89
TOTAL		1.424	0.021	1.445	3.032	768,000	111.45
(B) Above 1" and up to 2" bore—							
16	330	2.938	0.044	2.982	11.275	10,000	282.27
17	335	3.453	0.052	3.505	13.365	2,000	285.55
18	LS11	3.500	0.053	3.553	5.465	8,000	54.63
19	LS13	5.234	0.079	5.313	12.695	2,000	141.04
20	MS11	4.578	0.069	4.647	11.751	2,000	155.18
TOTAL		3.496	0.053	3.549	9.671	24,000	175.11
GRAND TOTAL (A&B)		1.487	0.022	1.509	3.233	7,92,000	115.94
<i>Adapter Bearings</i>							
(C) Above 1" and up to 2" —							
21	UT-140E	7.125	0.107	7.232	27.332	10,000	282.11
22	UT-145E	7.703	0.116	7.819	29.701	10,000	284.07
		7.414	0.112	7.526	28.517	20,000	283.13

APPENDIX VII

(Vide paragraph 13.2)

Statement showing costs of production and fair ex-works prices estimated per bearing of different sizes for the future

Serial No.	Bearing size No.	Raw materials	Conversion charges and depreciation	Total (3) + (4)	Interest on working capital return on block and variable royalty	Fair Ex-works price (5) + (6)	
1	2	3	4	5	6	7	
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs. a. p.
1	110	0.328	1.524	1.852	0.504	2.356	2 5 8
2	112	0.382	1.575	1.957	0.535	2.492	2 7 10
3	115	0.471	1.624	2.095	0.562	2.657	2 10 6
4	117	0.694	1.574	2.268	0.568	2.836	2 13 5
5	120	1.048	1.763	2.811	0.627	3.438	3 7 0
6	125	1.377	1.985	3.362	0.731	4.093	4 1 6
7	320	1.331	2.028	3.359	0.751	4.110	4 1 9
8	325	2.065	2.308	4.373	0.904	5.277	5 4 5
9	330	3.130	6.220	9.350	1.925	11.275	11 4 5
10	335	4.301	6.885	11.186	2.179	13.365	13 5 10
11	MS-8	1.470	2.152	3.622	0.845	4.467	4 7 6

1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs. a. p.
12	MS-10	2.406	2.603	5.009	1.057	6 1 1
13	MS-11	3.251	6.439	9.700	2.051	11 12 0
14	LS-8	1.111	1.790	2.901	0.682	3 9 4
15	LS-10	1.689	2.339	4.028	0.885	4 14 7
16	LS-11	2.047	2.447	4.494	0.971	5 7 5
17	LS-13	3.971	6.602	10.573	2.122	12 11 1
18	S-3	0.142	1.760	1.902	0.536	2 7 0
19	N-1025	0.157	1.525	1.682	0.478	2 2 1
20	UT-140E	7.848	15.214	23.062	4.270	27 5 4
21	UT-145E	11.707	13.858	25.565	4.136	29 11 3
22	310	0.476	1.575	2.051	0.537	2 9 5

APPENDIX VIII

(Vide paragraph 16)

Statement showing the Commission estimates of fair ex-works prices, the selling prices charged by the National Bearing Co. and the selling prices of imported ball bearings

Serial No.	Bearing No.	N. B. C.		Difference between fair ex-work price and selling price			Selling price of imported bearing	Difference between N.B.C. selling price and importers' selling price
		Fair ex-works price	Selling price	Estimated production for 1956	Amount	As percentage on fair ex-works price		
1	2	3	4	5	6	7	8	9
		Rs.	Rs.	'000's	Rs.	Percentage	Rs.	Rs.
1	110	2.356	4.000	100	1.644	69.78	4.000	..
2	112	2.402	4.500	92	2.098	86.58	4.500	..
3	115	2.657	4.875	24	2.218	99.17	4.875	..
4	117	2.836	5.250	240	2.414	85.12	5.250	..
5	120	3.438	5.438	200	2.000	58.17	6.000	(-)-0.562
6	125	4.093	6.688	10	2.595	63.40	7.000	(-)-0.312
7	310	2.538	4.500	8	1.912	73.88	5.000	(-)-0.500
8	320	4.110	7.000	10	2.890	70.31	7.250	(-)-0.250
9	325	5.227	9.000	10	3.773	72.18	9.500	(-)-0.500

4-3 T. C. Bom.

1	2	3	4	5	6	7	8	9
		Rs.	Rs.	'000's	Rs.	Percentage	Rs.	Rs.
10	330	11.275	14.375	10	3.100	27.50	12.000	2.375
11	335	13.365	16.875	2	3.510	26.26	14.000	2.875
12	MS 8	4.467	8.750	8	4.283	95.88	10.625	(-)-1.875
13	MS 10	6.066	11.125	10	5.059	83.40	14.375	(-)-3.250
14	MS 11	11.751	16.250	2	4.499	38.29	18.000	(-)-1.750
15	LS 8	3.583	6.750	16	3.167	88.39	9.250	(-)-2.500
16	LS 10	4.913	8.500	12	3.587	73.01	11.250	(-)-2.750
17	LS 11	5.465	10.000	8	4.535	82.98	13.625	(-)-3.625
18	LS 13	12.695	17.183	2	4.483	35.31	20.250	(-)-3.062
19	S ₃	2.438	3.750	12	1.312	53.81	5.500	(-)-1.750
20	N-1025	2.160	3.750	16	1.590	73.61	4.375	(-)-0.625
21	W 2½	22.965	24.375	1	1.410	6.14	16.125	8.250
22	UT 140E	27.332	24.063	10	(-)-3.269	(-)-11.96	15.625	8.438
23	UT 145E	29.701	27.813	10	(-)-1.888	(-)-6.36	17.000	10.813
Total		3.878	6.034	813	2.155	55.56	6.140	(-)-0.106